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DECONTAMINATION FACILITY OPERATIONS

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TITLE:
DECONTAMINATION FACILITY
OPERATIONS

Approved By:

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2.0 PURPOSE AND SCOPE

This standard operating procedure (SOP) describes procedures that will be used at Rocky Flats Plant (RFP) Decontamination Facilities (DF). DF as used in the context of environmental materials management at RFP refers to a fixed facility that will generally include a paved and bermed area equipped with sumps, pumps, and pressurized sprays intended for use in decontaminating large items that could not conveniently be decontaminated in a relatively uncontrolled environment. The terminology DF should not be interpreted to refer to any specific RFP decontamination facility. Presently, a Main Decontamination Facility (MDF) and a Protected Area Decontamination Facility (PADF) exist as noted in Figure FO.12-1.

This SOP is applicable to decontamination operations conducted as part of the Environmental Restoration Management (ERM) Program and is specifically applicable to heavy equipment and environmental materials containers (drums) used in a work area characterized by EG&G as potentially contaminated. (See SOP FO.10, Receiving, Labeling, and Handling Environmental Materials Containers.) This SOP is also specifically applicable to heavy equipment environmental materials containers and environmental liquids used in a work area characterized as not potentially contaminated but where field monitoring conducted during intrusive activities indicates the possible presence of contamination as noted in Subsection 6.1. If field monitoring conducted during intrusive activities does not indicate the presence of contamination, this SOP does not apply to heavy equipment and environmental materials containers that are used in a work area that is characterized by EG&G as not potentially contaminated. However, a subcontractor may choose to follow the procedures established by this SOP as general practice.

3.0 RESPONSIBILITIES AND QUALIFICATIONS

The EG&G project manager has the overall responsibility for implementing this SOP and will construct DFs as needed; provide certain equipment, as listed in Subsection 5.1, Equipment To Be Provided at the DF; and designate a subcontractor to be responsible for the day-to-day operation and

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maintenance of the DF. For the purposes of this SOP, the designated subcontractor is referred to as the DSC.

The DSC is responsible for providing general use equipment; coordinating with DF users to ensure efficient utilization of the DF; performing routine maintenance, operations, and minor repairs to equipment and facilities; managing environmental liquids and residual sediments that are brought to the DF; and maintaining documentation. In addition, the DSC is responsible for ensuring DF users and DSC personnel have the appropriate training as described below.

Individual subcontracting companies using the DF are responsible for coordinating with the DSC, providing the items specified in Subsection 5.2 and as described in Subsection 6.3, conducting the decontamination of their own equipment, and verifying the decontamination effectiveness. Additional equipment-specific decontamination guidance is available within SOP FO.4, Heavy Equipment Decontamination; SOP FO.5, Handling of Purge and Development Water; SOP FO.6, Handling of Personal Protective Equipment; SOP FO.7, Handling of Decontamination Water and Wash Water; SOP FO.8, Handling of Drilling Fluids and Cuttings; and SOP FO.10, Receiving, Labeling, and Handling Environmental Materials Containers.

All subcontractor project managers will be responsible for assigning project staff to implement this SOP and for ensuring the heavy equipment and environmental materials containers used by the subcontractor are decontaminated according to the procedures outlined in this SOP.

All personnel performing these procedures are required to have the appropriate health and safety training as specified in 29 CFR 1910.120. In addition, personnel are required to complete the Qualification Standard Package (QSP) for a decon pad operator, to provide instruction of the procedures described within this SOP. The QSP includes on-the-job training. Following the proper training, a qualification badge will be issued to the DF user by the EG&G FOM project manager. Personnel using light or heavy equipment, scientific monitoring devices, or operating vehicles must have appropriate training or licenses.

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4.0 REFERENCES

4.1 SOURCE REFERENCES

The following is a list of references reviewed prior to the writing of this procedure:

A Compendium of Superfund Field Operations Methods. EPA/540/P-87/001. December 1987.

Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities.
NIOSH/OSHA/USCG/EPA. October 1985.

Nuclear Weapon Accident Response Procedures (NARP) Manual. The Defense Nuclear Agency.
January 1984. Change 1, July 1984.

Radiological Operating Instruction 3.1, Performance of Surface Contamination Surveys. EG&G.

Standard Operating Safety Guides. EPA. November 1984.

4.2 INTERNAL REFERENCES

Related SOPs cross-referenced in this SOP are as follows:

- SOP FO.3, General Equipment Decontamination
- SOP FO.4, Heavy Equipment Decontamination
- SOP FO.5, Handling of Purge and Development Water
- SOP FO.6, Handling of Personal Protective Equipment
- SOP FO.7, Handling of Decontamination Water and Wash Water
- SOP FO.8, Handling of Drilling Fluids and Cuttings
- SOP FO.10, Receiving, Labeling, and Handling Environmental Materials Containers

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- SOP FO.13, Containerizing, Preserving, Handling, and Shipping of Soil and Water Samples
- SOP FO.15, Photoionization Detectors (PIDs) and Flame Ionization Detectors (FIDs)
- SOP FO.16, Field Radiological Measurements
- SOP FO.20, Sampling of Liquids and Solids from Environmental Materials
- SOP SW.6, Sediment Sampling

Main and Protected Area Decontamination Facilities Field Sampling Plan

5.0 EQUIPMENT REQUIRED

Various equipment items, supplies, and structures must be provided for the DF to function as intended. The equipment listing has been divided into subsections: Subsection 5.1, Equipment and Supplies to be Provided at the DF; Subsection 5.2, Equipment and Supplies to be Provided by DF Users; and Subsection 5.3, DF Configuration.

5.1 EQUIPMENT AND SUPPLIES TO BE PROVIDED AT THE DF

The following is a list of equipment that will be provided at the DF for general use. The party responsible (EG&G or the DSC) for providing each item is indicated in parentheses.

- Sumps and tanks for the collection and holding of environmental liquids and sediments (EG&G)
- One or more moveable tanks for containing RFP tap water for use during decontamination (EG&G)

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- Polyvinyl chloride (PVC) piping and fittings to convey water between various pieces of process equipment and environmental liquids tanks (EG&G)
- Hoses (1 inch, 2 inch, and 3 inch in diameter) to convey environmental liquids to and from the various sumps, pumps, and tanks on a temporary basis (EG&G)
- High pressure steam cleaner and high pressure wash and rinse systems (EG&G)
- Portable power generators (EG&G)
- Splash screens (EG&G)
- Wooden pallets (EG&G)
- A rough terrain forklift or equivalent heavy equipment item outfitted with a "drum grapppler" (EG&G)
- A drum rack designed to hold empty 55-gallon drums or 30-gallon drums in a manner that promotes an outward flow of decontamination fluids from the drum interior as it is being decontaminated (EG&G)
- Flammable material storage facility/cabinet (EG&G)
- A trash can for containerizing uncontaminated environmental materials (EG&G)
- Tank ladders for access to the environmental liquid storage tanks for sampling operations (EG&G)
- Gray, removable-top 55-gallon or 30-gallon drums (EG&G)

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- A two-wheeled "dolly" designed to carry 55-gallon drums (DSC)
- Plastic sheeting (DSC)
- Long and short-handled stiff bristle brushes (DSC)
- Wire brushes (DSC)
- Wash and rinse buckets for equipment interiors (DSC)
- Premoistened towelettes and Kimwipes (DSC)
- Duct tape or equivalent (DSC)
- Anemometer to allow decontamination workers to determine the wind speed and direction (DSC)
- A bottom filling bailer or equivalent to collect water samples from the environmental liquid storage tanks (DSC)
- Sludge/sediment sampler used to sample sludges and sediments from 55-gallon or 30-gallon drums (DSC)

5.2 EQUIPMENT AND SUPPLIES TO BE PROVIDED BY DF USERS

Each subcontractor that uses the DF will provide the following equipment and supplies as needed to complete its decontamination activities:

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- Personal protective equipment (PPE) as required by the site-specific Health and Safety Plan
- Environmental materials containers (obtained from EG&G) for non-reusable items required to remove soils dislodged during decontamination
- An organic vapor detector (OVD) and a radiation monitor to screen equipment and environmental materials containers for an estimate of the effectiveness of decontamination efforts
- Wash and rinse buckets necessary to clean small items and to establish a personal decontamination line
- Any equipment or task-specific decontamination fluids required by a SOP or DCN that are not listed as being available at the DF
- Blank environmental materials container labels to replace any completed labels that become dislodged or rendered illegible during the decontamination process

5.3 DF CONFIGURATION

The typical DF process flow diagram is depicted in Figure FO.12-2. A DF consists of three functional areas: the equipment decontamination pad, the environmental liquids management area, and the drum transfer area. A typical DF pad layout is shown in Figure FO.12-3.

5.3.1 Equipment Decontamination Pad

The equipment decontamination pad will include a drainage system, a sump for collection of fluid runoff, and a pumping system for moving fluids from the sump to the environmental liquids

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management area. Wet sediments will be removed from the sump manually or, when feasible, pumped into 55-gallon gray drums.

A DF will use a concrete pad capable of supporting large equipment for cleaning. The entrance and exit will also be sloped and curbed to contain and collect environmental liquids, solids, and sludge generated during cleaning operations. The approaches to the pad will be sloped to allow equipment to be driven onto and off the facility. A sump will be located below and in the middle of the pad to collect waste materials.

The DF operations typically uses gasoline-driven pumps for day-to-day activities. A typical pump setup is shown in Figure FO.12-3.

5.3.2 Environmental Liquids Management Area

The environmental liquids management area will consist of a berm area containing large storage tanks and sedimentation tanks located between the bermed area and the decontamination pad. Environmental liquids will be collected in the pad and sump.

The process of separating the solids from the environmental liquids generated at the DF will use two cyclone separators in series. The separators remove a large portion of the suspended particles remaining in the environmental liquids pumped from the pad sump.

After the cyclone separators, the environmental liquids will be pumped through sedimentation tanks connected in series. These tanks provide additional removal of solids by using gravity settling. A typical tank set up is shown in Figure FO.12-3.

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5.3.3 The Drum Transfer Area

The drum transfer area is the point at which the DSC transfer the gray drums containing sediments and solids from decontamination activities to Facilities Operation Management (FOM) representatives. Filled drums will be transferred in accordance with SOP FO.23, Management of Soil and Sediment Investigation Derived Materials (IDM).

6.0 PROCEDURES

6.1 INTRODUCTION

Effective decontamination procedures are required to minimize the potential for cross-contamination, off-site contaminant migration, and personnel exposure from improperly decontaminated equipment. Heavy equipment, environmental materials containers, and environmental liquids may become contaminated in either of the two following scenarios: (1) when used in a work area characterized as potentially contaminated such as an Individual Hazardous Substance Site (IHSS) or (2) when used in a work area characterized as not potentially contaminated but where field monitoring conducted during field activities indicates the possible presence of contamination. Because contamination is not always easily discernible, it will be assumed that equipment used in one of the two preceding scenarios has been contaminated and will, therefore, require decontamination.

Procedures established in this SOP are not applicable for heavy equipment used in a work area characterized as not potentially contaminated where no verified positive detections were encountered during field monitoring. However, heavy equipment used in these work areas may be washed at the DF. Form FO.4A, Heavy Equipment Decontamination/Wash Checklist and Record, Sections I, II, and III, will be completed for heavy equipment decontaminated or washed. (See SOP FO.4, Heavy Equipment Decontamination.)

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6.2 DESIGNATED SUBCONTRACTOR (DSC)

The subcontractor designated to maintain and operate the DF and EG&G is responsible for providing general-use equipment as specified in Subsection 5.1. The DSC will coordinate with DF users to ensure efficient use of the DF; perform routine maintenance, operations, and minor repairs to equipment and facilities as described below; manage environmental liquids and residual sediments (as described in Subsection 6.5) that are placed at the DF; and maintain documentation as described in Section 7.0.

6.2.1 Coordinating With DF Users

The DSC will coordinate with DF users by accomplishing the following:

- Providing SOP training on the use of the DF
- Maintaining a roster of DF users and a point of contact to receive information regarding the operation of the DF
- Devising and posting a system of priorities for use of the DF
- Informing other subcontractors of any changes to this SOP
- Scheduling foreseeable periods of "downtime" and notifying other subcontractors of both scheduled and unscheduled periods of "downtime"
- Scheduling use of EG&G-owned rough terrain forklift and skid loaders

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6.2.2 Routine Maintenance, Operations, and Minor Repairs

At the beginning of each day of ERM field operations, the DSC will perform the following:

- Visually inspect the DF to verify that the required equipment and supplies are on-hand and operational.
- Reinstall splash screens if they have been removed and repair any small tears by applying duct tape or equivalent over the tear on both sides of the screens. Significant tears in the screen will require replacement.
- Perform routine maintenance on equipment by following instructions in the equipment owner's manuals.
- Fill freshwater tank to supply fluids for decontamination.
- Pump liquids from the sump into the sedimentation tanks and then into a storage tank. If, after the liquid has been pumped, a sufficient amount of sediment has accumulated in the sump or sedimentation tank, the sediment will be handled as described in the site-specific field sampling plan.
- When necessary, use the steam generator to de-ice the DF.
- Monitor the DF pad floor surface sump and general work area with an OVD in accordance with FO.15, Photoionization Detectors (PID) and Flame Ionization Detectors (FID). OVD monitoring will be performed by opening the hatches on sedimentation Tank No. 2 and Tank No. 3.

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- Monitor the leak detection system monitoring pipe with an OVD in accordance with FO.15, Photoionization Detectors (PID) and Flame Ionization Detectors (Figures FO.12-2 and FO.12-3).
- Survey the DF pad floor and equipment station platforms with Bicon FIDLER with a Bicon Analyst meter, a scaler, and Bicon G-5 scintillation probe in accordance with FO.16, Field Radiological Measurements. If the readings are two times background and/or greater than 300 dpm/100cm² for total alpha contamination, dry surface smears will be taken followed by decontamination. After decontamination, additional smears will be taken to confirm a thorough decontamination has occurred.
- When necessary, drain and winterize all equipment that could be damaged as a result of freezing fluids. (Note: Ethylene glycol will not be used as an antifreeze in any of the pressurized spray systems.)
- Pump liquids from the floor sump into sedimentation tank No. 1.
- Complete Form FO.12A, Equipment Decontamination Pad Daily Inspection Checklist.

Once a week during ERM field operations, the DSC will perform the following:

- Conduct radiological smear surveys once a week on splash screens, separators, tanks, and powered equipment in accordance with FO.16, Field Radiological Measurement

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6.3 DF USERS

Subcontractors using the DF are responsible for providing the items specified in Subsection 5.2; conducting decontamination of equipment and verification of decontamination effectiveness as described previously in Subsection 6.1; coordinating with the DSC; notifying the designated EG&G Project Manager; and conducting operations at the DF as described below.

6.3.1 Coordinating With the DSC

Before a subcontractor may initially use the DF, that subcontractor must register with the DSC and designate an employee to serve as a point of contact to interface with the DSC (Subsection 6.2.1). DF users are to notify the DSC if any excessive usage of the DF is anticipated. The users will log in with the DSC prior to using the DF each day. The DF users will notify the DSC site manager by radio upon arrival and departure.

6.3.2 Operations At the DF

- DF users will observe all Health and Safety requirements posted and instructed in the project specific Health and Safety Plan.
- Splash screens must be closed if pressurized sprays are to be used.
- Subcontractors should request that DSC personnel pump the DF floor drain sump if planned decontamination activities are likely to cause the sump to overflow.
- The "buddy system" will be employed while decontamination activities are being conducted with the splash screens closed.

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- Items from different work areas will not be decontaminated simultaneously within the screened-in area of the DF.
- Each DF user will steam clean all surfaces within the screened portion of the DF after each use. Screens used to enclose the decontamination pad and equipment used during equipment decontamination will be steam cleaned.

6.4 EG&G FACILITIES OPERATIONS MANAGEMENT (FOM)

EG&G FOM will perform a daily inspection of the environmental liquids tanks at the DF and record observations on Form FO.12B. Any deficiencies noted will be immediately brought to the attention of the DSC for corrective action.

6.5 SYSTEMS OPERATION

Once environmental liquids and waste material are collected in the pad sump, three stages of separation/transfer will be completed before the liquid and solids are transported for disposal. These three separation/transfer stages are:

- Sump through separators to sedimentation tanks
- Sedimentation tanks to storage tanks
- Storage tanks to tanker truck

Functions, operations, and emergency procedures for each separation transfer stage are listed below.

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6.5.1 Sump Through Separators to Sedimentation Tanks Transfer

6.5.1.1 Function

The function of the sump transfer system is to separate solids from decontamination environmental liquids and then transfer these liquids and solids to storage. Storage for the liquids is provided by environmental liquid storage tanks, and the storage for solids is provided by 55-gallon gray drums.

6.5.1.2 Normal Operation

Environmental liquids with suspended solids collected in the sump are transferred through the system via a transfer pump. A hose is connected from the sump to the suction side of the transfer pump. Another hose is connected from the transfer pump discharge to the separators. Liquid is pumped from the sump through the separators to separate out the larger particles entrained in the liquid stream. From the separators, the liquid is transferred to a primary sedimentation tank, then through two secondary sedimentation tanks. These tanks are configured in series and are used to separate finer particles from the environmental liquids through gravity settling. Flow between tanks is by gravity.

Environmental liquids visually determined to contain a high level of suspended solids may be recycled from the first sedimentation tank back through the separators via a second transfer pump. This is accomplished by reconfiguring the system. The suction hose from the sump is placed in the separation tank, and that liquid is transferred back through the system for further separation. The decision to use this procedure is strictly based upon clarity of the liquid and DSC discretion.

Once the transfer of environmental liquids is complete, all flexible hosing that was used is drained of water. All liquid entrained in this hosing is collected in the sump or in the environmental liquids tank containment berm.

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Solids from the separation process are collected in the sump, separators, and sedimentation tanks. All solids are routed to the sump, combined, sampled in accordance with the site-specific Field Sampling Plan and FO.20, Sampling of Liquids and Solids from Environmental Materials, and then placed in 55-gallon gray drums. Solids from the separators are returned to the sump by opening a bottom valve connected to flexible hoses. Solids from the sedimentation tanks are returned to the sump using containers. These solids are mixed in the sump in accordance with the site-specific Field Sampling Plan and FO.20, Sampling of Liquids and Solids from Environmental Materials, placed in gray drums, and then stored in the drum transfer area by lot.

Caution:

Emergency shutdown procedures are enacted when there is a problem with the transfer of liquid from the sump to the separation equipment. In the event of an emergency shutdown, the DSC will contact the EG&G Project Manager. Problems that may occur are line breakage, pump malfunction, and hose or fitting malfunction. Any problem with liquid transfer requires the pump be shut down to stop any additional liquid from entering the system. Once the pump is shut down, the problem is isolated; and any further spillage or leakage is prevented by correcting the malfunction.

6.5.2 Sedimentation Tanks to Storage Tanks Transfer

6.5.2.1 Function

The function of the sedimentation tank to storage tank transfer system is to move the clear water from the last sedimentation tank to one of the environmental liquid storage tanks. The transfer occurs when the overall separation system approaches capacity and the third sedimentation tank is full. If freezing is anticipated, this transfer will occur daily.

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6.5.2.2 Normal Operation

Environmental liquids that are determined to be clear after passing through the entire separation process are transferred from the last sedimentation tank to the environmental liquids storage tanks via the second transfer pump. A hose is placed in the separation tank and then connected to the suction side of this transfer pump. Another hose is connected from the discharge of this pump to the separator and then to the manifold. Liquid is transferred from the separation tank, through the separators, and into the selected storage tank via the manifold.

Caution:

Emergency shutdown procedures are enacted when there is a problem with liquid transfer from the third sedimentation tank to the environmental liquids storage tanks. In the event of an emergency shutdown, the DSC will contact the EG&G Project Manager. These problems include pump malfunction, and line or connector leakage. If the pump malfunctions, it is shut down; and the separation tank and appropriate manifold valve is closed. If a line or connector leakage occurs, the pump is shut down; and the separation tank and appropriate valve on the manifold is closed. Once the problem is corrected, transfer can continue.

6.5.3 Storage Tanks to Tanker Truck Transfer

6.5.3.1 Function

The function of the environmental liquid storage tanks to tanker truck transfer is to move water from the 2,500-gallon storage tanks to a mobile tanker truck. This transfer occurs when the environmental liquids tanks are full and sampling and analysis are complete.

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6.5.3.2 Normal Operation

DSC personnel will wear appropriate PPE in accordance with the project-specific health and safety plan.

Decontamination water is moved from the environmental liquids tanks to the tanker truck via a transfer pump. At the discretion of the DSC, the environmental liquids may be run through the separators for removal of additional sediments. The transfer pump has its suction hose connected to the manifold and its outlet hose connected to the separators. From the separators, a hose is connected to the tanker truck. The valve corresponding to the appropriate environmental liquid storage tank is opened at the manifold, and water is transferred from the selected tank through the manifold and separators to the tanker truck. Transfer will not occur until the contents of the selected storage tank have been sampled and the analysis is complete, as described in the site-specific Field Sampling Plan.

Caution

Emergency shutdown procedures are enacted when there is a problem with the liquid transfer from the environmental liquid storage tank to the tanker truck. In the event of an emergency shutdown, the DSC will contact the EG&G Project Manager. These problems include hose and fitting leakage and pump malfunctions. If these problems occur, then the pump is shut down, the tanker truck valve is closed, and the problem is isolated and corrected.

6.5.4 Special Conditions

The operations of the DF may be interrupted for scheduled and unscheduled maintenance, health and safety reasons, or weather conditions. Shutdowns for health and safety reasons include site personnel in jeopardy, monitoring equipment malfunctioning, and/or a strong potential for accidents. Weather conditions which would necessitate a shutdown include heavy rainfall, potential for heat/cold stress, tornados, electrical storms within 10 miles, limited visibility (fog), and wind greater than 15 mph for

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two 15-minute periods. Health and safety shutdown conditions are outlined in the site-specific Health and Safety Plan.

6.6 PERSONAL DECONTAMINATION

- DF users will bring a sufficient quantity of containers to the DF to establish a personal decontamination line as required by the site-specific Health and Safety Plan. DF user personnel will decontaminate the personal decontamination containers that hold decontamination and rinse fluids.
- DSC personnel will conduct personal decontamination as described in the applicable Health and Safety Plan.
- Personal decontamination lines will not be established downwind of any pressurized sprays being used at the DF.

6.7 ENVIRONMENTAL MATERIALS HANDLING AND SAMPLING

Environmental materials generated at the DF will normally fit within one of the following categories:

- Unrepairable equipment
- PPE worn by DF users when decontaminating equipment or environmental materials containers
- PPE worn by DSC employees working at the DF
- Water brought to the DF by subcontractors and water used to decontaminate equipment and environmental materials containers

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- Sediments generated during decontamination activities

6.7.1 Unrepairable Equipment

Unrepairable equipment used by DSC employees working at the DF will be thoroughly decontaminated in accordance with FO.3, General Equipment Decontamination. EG&G Rad Engineering will be contacted for guidance on disposal of unrepairable equipment.

6.7.2 PPE

PPE worn during decontamination of equipment by DCS employees will be disposed of in accordance with SOP FO.6, Handling of Personal Protective Equipment. PPE worn by DCS users will be disposed of in the same manner as PPE used during the field operation that warranted the decontamination activity.

6.7.3 Environmental Liquids

Environmental liquids will be emptied into the sedimentation tanks or pad sump before being pumped into the environmental liquid storage tanks. When a storage tank becomes full, the DSC will open the tank, monitor the tank interior with an OVD, and use a bottom-filling bailer or equivalent to collect a sample. Environmental liquid samples will be analyzed by an EG&G approved laboratory for the analytes as noted in the site-specific field sampling plan. The sampler will be decontaminated as described in SOP FO.3, General Equipment Decontamination, before and after each sample collection event. The sample will be collected in accordance with FO.20, Sampling of Liquids and Solids from Environmental Materials. As the bailer is removed from the environmental liquid storage tank, its contents will be emptied into a sample container and the container sealed. The sample container exterior will then be decontaminated and the sample transferred to the DSC's sample manager for marking and handling as described in SOP FO.13, Containerizing, Preserving, Handling, and Shipping of Soil and Water Samples. All samples will be marked to reflect the environmental

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liquid storage tank from which they were drawn. After sampling, the tank will be sealed to prevent the addition of more environmental liquids.

Results of sample analysis will be used by an EG&G representative to determine the disposition of the tank's contents. In order for the environmental liquids to be treated on site, the disposal requirements for on-site treatment facilities must be met. The DSC will notify EG&G FOM personnel who will use an appropriately sized tanker truck to transport the environmental liquid storage tank's contents to the EG&G treatment facility. If the analyte concentrations are greater than on-site treatment facility requirements, the DSC will pump approximately one-half of the storage tank's contents into a separate environmental liquid storage tank and then add environmental liquids from either an unsampled environmental liquid storage tank or from the settling basins. Resampling will be accomplished and the analytical results used to determine how each storage tank's contents will be handled. These procedures will be conducted every time an environmental liquid storage tank becomes full.

6.7.4 Sediments in the Decontamination Pad Floor Drain Sump and Sediments in the Sedimentation Tank Bottoms

Sediments generated at the DF will be composited in gray 55-gallon 17C drums. Sediments will be placed in the drum up to approximately six inches from the top. Gray drums used by the DSC will be obtained, marked, and handled as described in SOP FO.10, Receiving, Labeling, and Handling Environmental Materials Containers. Samples will be collected in accordance with FO.20, Sampling of Liquids and Solids from Environmental Materials. Collected samples will be transferred to the DSC's designated representative to be analyzed in accordance with the site-specific field sampling plan.

6.8 DRUM TRANSFER

The drum transfer area and the drum staging area at the DF will be identified by signs.

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6.8.1 Drum Transfer Procedures

Filled drums will be sealed and marked as described in SOP FO.10, Receiving, Labeling, and Handling Environmental Materials Containers, before being transported to the 90-day accumulation area in accordance with FO.23, Management of Soil and Sediment Investigation Derived Materials (IDM).

The DSC will maintain a Drum Field Log Form (See SOP FO.10, Receiving, Labeling, and Handling Environmental Materials Containers) on each drum issued to them by EG&G. The Drum Field Log Form is partially completed at the DF and documents the type of environmental materials contained in the drum. When EG&G FOM personnel take custody of the drums, subcontractor personnel will complete the Drum Field Log Form by recording the name of the EG&G representative receiving the drum.

7.0 DOCUMENTATION

The DSC responsible for operation of the DF will maintain a bound activities log book. The activities log is intended to reflect the daily activities accomplished in order to operate and maintain the DF. Additionally, Form FO.12A, Equipment Decontamination Pad Daily Inspection Checklist, will be completed on a daily basis.

The FOM is responsible for completion of Form FO.12B, The Environmental Waste Management Storage/Treatment Tank Inspection Log Sheet.

A Drum Field Log Form (Form FO.10A) will be kept on each drum issued to the DSC until the drum is returned to an EG&G representative. A copy of the Drum Field Log Form will be given to the EG&G representative within a week of being completed.

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The DSC will conduct an inspection of the drums within the temporary staging area or any gray drum used for general use. The inspection should be conducted at least weekly. The Drum Inspection Form (Form FO.10B) will be used to document these inspections.

A Contaminant Characterization Form (FO.10C) will be used for the characterization of the environmental materials collected at the DF that have been placed in gray drums and are suspected to contain radioactive and/or hazardous substances (The preceding forms are described in detail in SOP FO.10, Receiving, Labeling, and Handling Environmental Materials Containers).

EQUIPMENT DECONTAMINATION PAD DAILY INSPECTION CHECKLIST

Facility and Equipment Inspection

Date _____

Facilities and Equipment Operational: ____ Yes ____ No (If no, explain and describe corrective action)

The Equipment Decontamination Pad is to be visually inspected at the beginning of each day of Environmental Management (ERM) field operations. All deficiencies should be reported to the Decontamination Operations Manager immediately. Decontamination operations should not commence until all deficiencies have been corrected.

EQUIPMENT DECONTAMINATION PAD

ACCEPT

NONACCEPT

COMMENTS

T

- 1) Check fill slope for excessive erosion or cracking.
- 2) Check fill slope for unusual staining which may be indicative of leakage.
- 3) Check copolymer pad coating for cracking, peeling, bubbling, staining, or any unusual appearance.
- 4) Check concrete decontamination pad for cracking, chipping, spalling, or any unusual appearance.
- 5) Check that floor sump has been pumped clean of any liquids.
- 6) Check splash screens for any tears and inspect integrity of previous repairs.
- 7) Inspect all tanks, joints, gauges, pipes, and couplings for any drips, leaks, residues, or signs of corrosion.
- 8) Inspect berms around environmental liquids management area for breaches, cracks, and/or signs of excessive erosion.
- 9) Estimate the remaining capacity in each of the environmental liquids tanks as well as the sedimentation tanks.
- 10) Make sure decontamination fluid and rinse fluid reservoir levels are adequate.
- 11) Check tank tie downs and make sure they are tight.
- 12) Inspect monitor pipe weekly for fluid leaking to the inner liner.
- 13) Ensure that all signs and labels are in place.

DF Waste Management Activities

Liquid Waste Holding Tanks Sampled: _____

Tank(s) Number(s) _____

DF Pad Sampling Liquid Pumped and Dredger Removed? ____ Yes ____ No (if No explain)

Results of DF Facility and Equipment Monitoring.

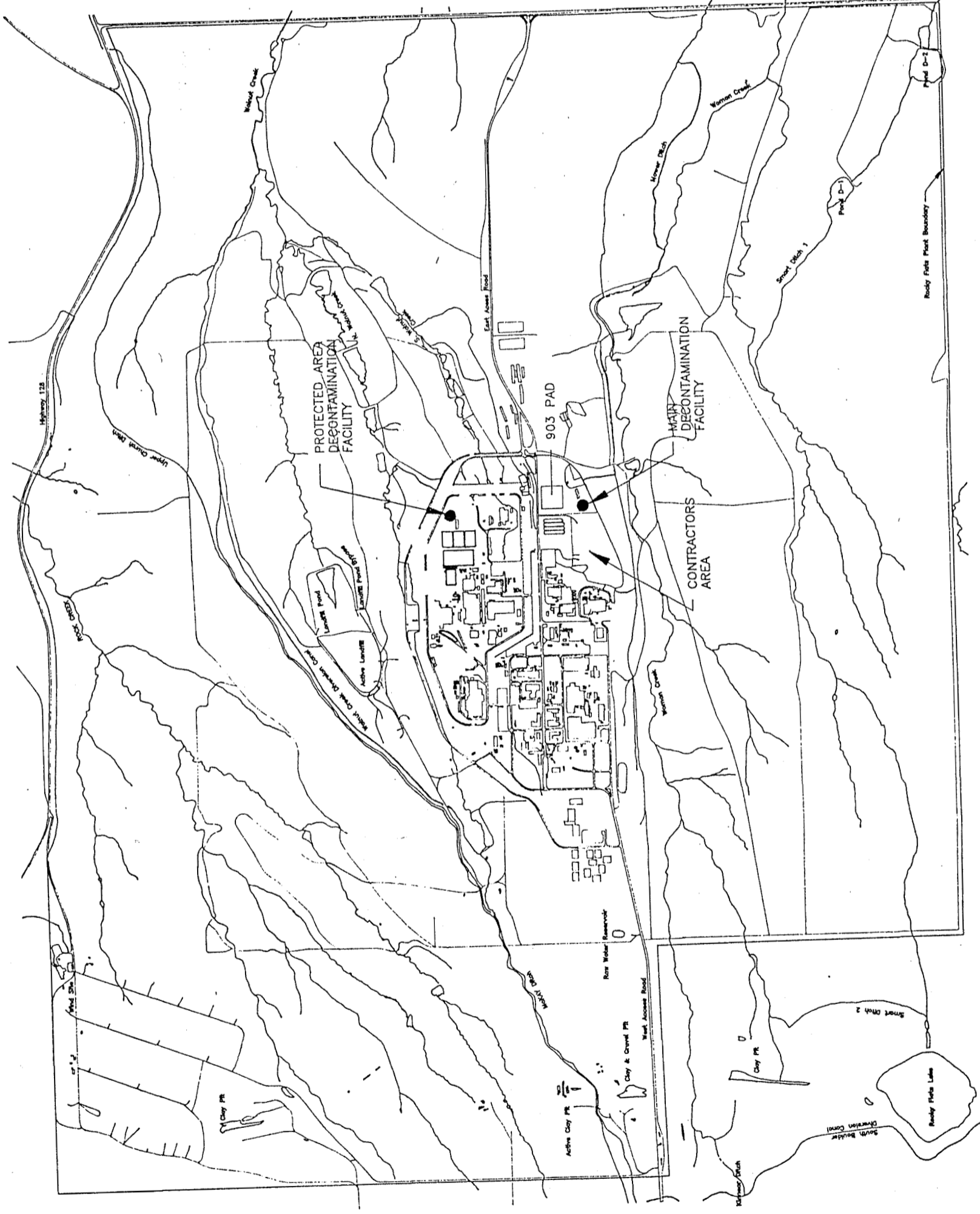
OVD _____ RAD _____ OVD _____ OVD _____ OVD _____
 (pad) (pad) (mont. pipe) (Sed. Tank #1) (Sed. Tank #2)

(Name)

(Subcontractor)

(Phone)

(Signature)



The diagram illustrates the four types of magnetic poles and magnets. It shows a North pole (N) and a South pole (S) on the left. To their right are two magnets: one with a pointed tip and one with a flat end. The magnets are shown with their internal magnetic field lines, indicating the direction of the magnetic force.

SCALE : 1 INCH = 2000 FEET.

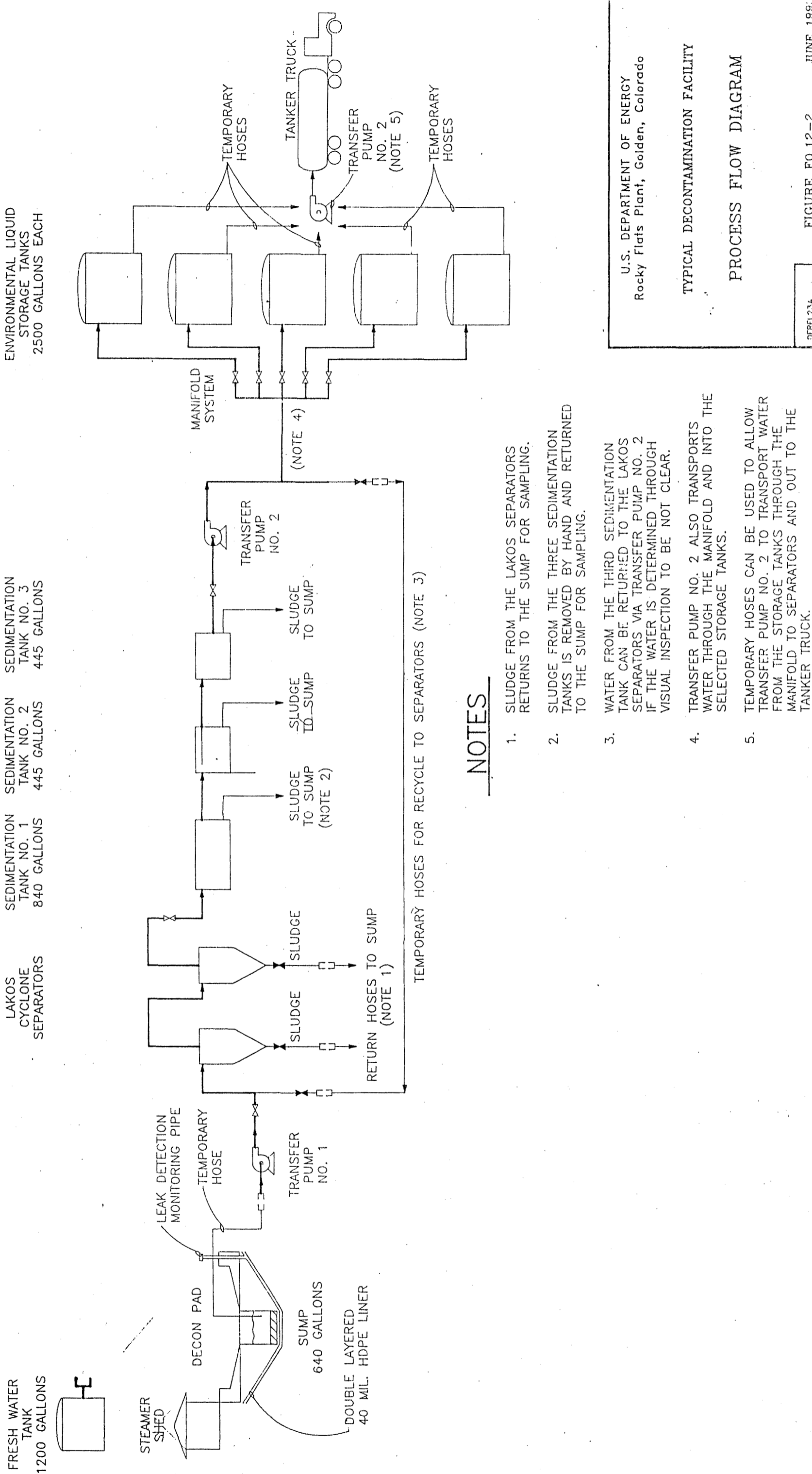
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DECONTAMINATION FACILITIES

LOCATIONS

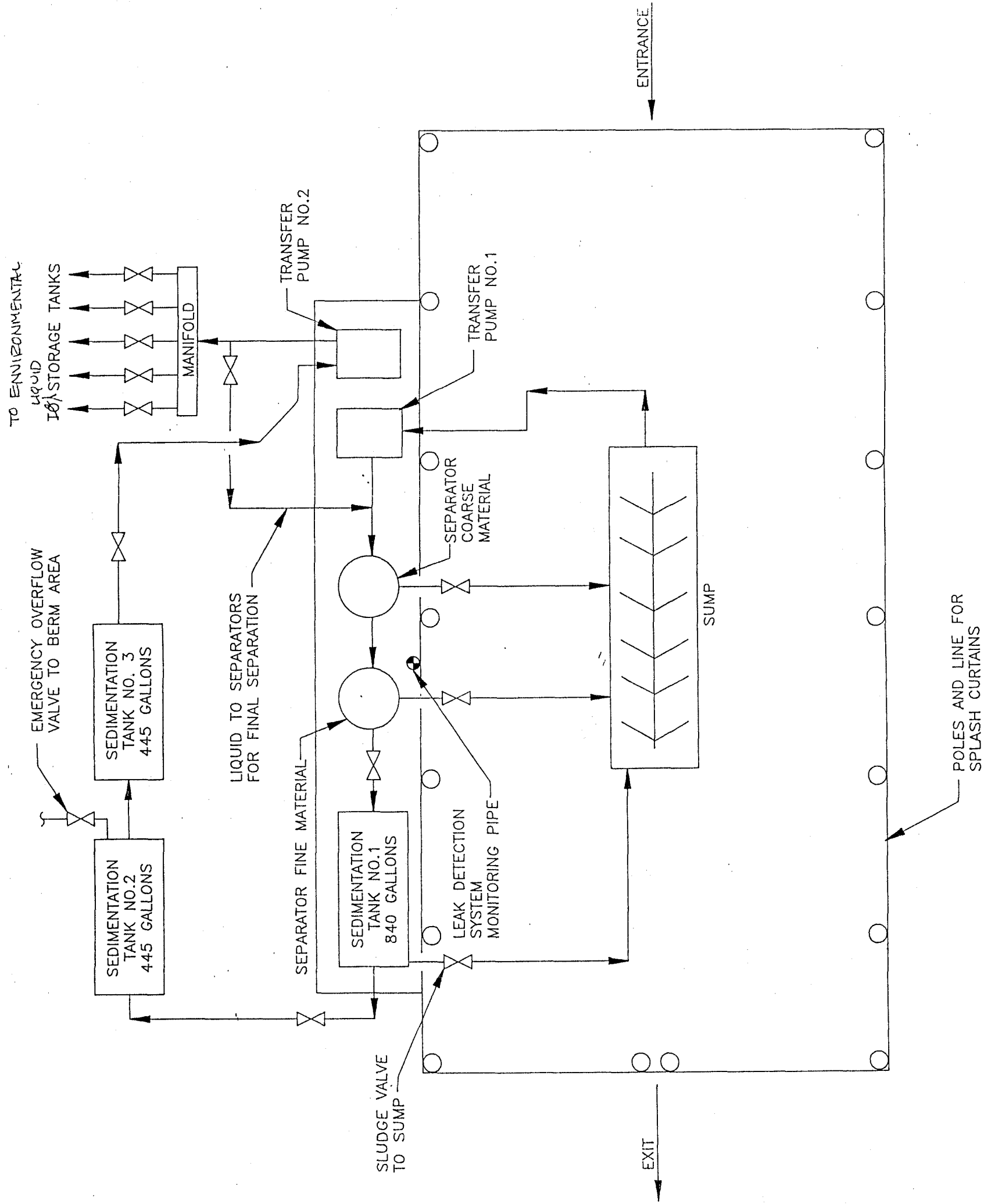
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FIGURE FO. 12-1



NOTES

1. SLUDGE FROM THE LAKOS SEPARATORS RETURNS TO THE SUMP FOR SAMPLING.
2. SLUDGE FROM THE THREE SEDIMENTATION TANKS IS REMOVED BY HAND AND RETURNED TO THE SUMP FOR SAMPLING.
3. WATER FROM THE THIRD SEDIMENTATION TANK CAN BE RETURNED TO THE LAKOS SEPARATORS VIA TRANSFER PUMP NO. 2 IF THE WATER IS DETERMINED THROUGH VISUAL INSPECTION TO BE NOT CLEAR.
4. TRANSFER PUMP NO. 2 ALSO TRANSPORTS WATER THROUGH THE MANIFOLD AND INTO THE SELECTED STORAGE TANKS.
5. TEMPORARY HOSES CAN BE USED TO ALLOW TRANSFER PUMP NO. 2 TO TRANSPORT WATER FROM THE STORAGE TANKS THROUGH THE MANIFOLD TO SEPARATORS AND OUT TO THE TANKER TRUCK.



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TYPICAL DECONTAMINATION PAD LAYOUT

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FIGURE FO. 12-3 JUNE 199